

The listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended). Method for coating a piston ring (10) for internal combustion engines, consisting of steel or cast iron, in which at least the working surface (07) of the piston ring is provided with an anti-abrasion or anti-corrosion coating (12) by means of a coating process,

characterized by comprising the characteristics:

- a) Adjusting the coating parameters;
- b) Applying a pre-stress to an uncoated piston ring (10), to a predetermined piston ring diameter (06) or total free gap (01);
- c) Carrying out the ion coating process using the coating parameters according to step a);
- d) Measuring the inherent coating stress of the anti-abrasion or anti-corrosion coating (12) in status b);
- e) Applying a tensile pre-stress or pressure pre-stress to a new, uncoated piston ring 10, as a function of the measured inherent coating stress; and

f) Coating the piston ring (10) by means of the coating parameters according to step a).

Claim 2 (currently amended). Method according to claim 1, ~~characterized in that~~ wherein in the case of an inherent pressure stress of the anti-abrasion or anti-corrosion coating, the piston ring (10) has a pressure pre-stress applied to it at the ring circumference during process step f), and in the case of an inherent tensile stress of the anti-abrasion and anti-corrosion coating (12), the piston ring (10) has a tensile pre-stress applied to it at the circumference.

Claim 3 (currently amended). Method according to claim 2, ~~characterized in that~~ wherein the inherent coating stress of the anti-abrasion and anti-corrosion coating (12) has a value of (minus) -200 to (minus) -800 N/mm², after being coated, in the installed state of the piston ring (10) in the cylinder of an engine.

Claim 4 (currently amended). Method according to claim 1 and 2, ~~characterized in that~~ wherein application of the tensile or pressure pre-stress to the piston ring (10) takes place over the entire duration of the coating process.

Claim 5 (currently amended). Method according to claim 1, ~~characterized in that~~ wherein the measurement of the inherent coating stress is performed, after the coating process has taken place, by means of X-ray diffraction.

Claim 6 (currently amended). Method according to claim 5, ~~characterized in that~~ wherein the X-ray diffraction measurement takes place opposite the ring joint (02).

Claim 7 (currently amended). Method according to claim 1, ~~characterized in that~~ wherein the anti-abrasion or anti-corrosion coating is formed from a CrN or Cr₂N or TiN or TiC anti-abrasion or anti-corrosion coating (12).

Claim 8 (currently amended). Method according to claim 1, ~~characterized in that~~ wherein the coating process is a PVD process.

Claim 9 (currently amended). Method according to claim 1, ~~characterized in that~~ wherein the coating process is a galvanic process.